A NEW SPECIES OF *NYCTIOPHYLAX* (TRICHOPTERA: POLYCENTROPODIDAE) FROM ALABAMA AND MISSISSIPPI[1]

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ABSTRACT: A new species of *Nyctiophylax, N. serratus,* is described from Alabama and Mississippi, bringing to nine the number of known Nearctic species. The sclerotized lateral lobes of tergum X are serrated apically, a feature unique among members of the genus.

Eight species of the genus *Nyctiophylax* have been described from the Nearctic region. Morse (1972) clarified taxonomic confusion, described two additional species and presented a key to the seven species then known to occur in North America. The eighth species was described from Alabama and Florida by Lago and Harris (1983). An additional species has been discovered in material collected during a general survey of the caddisflies of Alabama and is herein described. Terminology for genitalia follows Schmid (1980). Abbreviations refer to structures labeled in Fig. 1.

Nyctiophylax serratus n. sp.

Male. Length 5 mm. Head light brown, abdominal tergites medium brown, remainder of body testaceous. General structure typical for genus. Genitalia as in Fig. 1. Tergum IX membranous. Sternum IX reduced on meson, triangular in lateral view with subacute transverse ventral ridge. Tergum X membranous with pair of subdorsal, trapezoidal, moderately and uniformly sclerotized blades (1.1.X). Apical margins of blades oblique, slightly sinuate and distinctly serrate in lateral view (Fig. 1 D). Preanal appendages (pr.) broad, rounded. Intermediate appendages (int.) evenly decurved, tapered and relatively thin. Inferior appendages (inf.), viewed caudally, quadrate, not shouldered mesally, apical lobes parallel, mesal lobe about twice the length of lateral lobe, all lobes rounded apically. Aedeagus with a pair of dorsal sclerotized rods, rods elongate and acute, slightly sinuate near apex.

Holotype, male. ALABAMA, *Baldwin Co.,* Farris Creek x Hwy 59, 11 May 1982. S. Harris.

Paratypes. ALABAMA, *Baldwin Co.,* same data as holotype, 1 ♂; Red Hills Creek x Hwy 59, 18 Aug 1983, Harris and O'Neil, 5 ♂; Sandy Creek x Hwy 98, 23 Jun 1982, Harris and O'Neil, 2 ♂; Nelson Branch junction Perdido River, 3 mi. E. Gateswood, 23 Jun 1982, Harris and O'Neil, 5 ♂; Blackwater River x Hwy 87, 23 Jun 1982, Harris and O'Neil, 4 ♂; Pine Log Creek x Hwy 59, 11 May 1982, S. Harris, 2 ♂; Hall Creek x Hwy 59, 11 May 1982, S. Harris, 4 ♂; Little River x Hwy 59, 11 May 1982, S. Harris, 1 ♂. *Choctaw Co.,* Middle Tallawampa Creek x Co. Rd. 23, 11 May 1982, S. Harris, 2 ♂. *Escambia Co.,* Escambia River at Flomaton, 6 Aug 1982, S. Harris, 3 ♂. *Franklin Co.,* Dismal Branch at falls, Dismal Wonders Garden, 29 May 1983, S. Harris, 1 ♂. *Green Co.,* Trussels Creek x Co. Rd. 23, 22

[1]Received April 7, 1984. Accepted August 24, 1984.

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Jun 1982, Harris & O'Neil, 2 ♂; Brush Creek x Co. Rd. 14, 22 Jun 1983, Harris and O'Neil, 1 ♂. *Lauderdale Co.,* Threet Creek x Co. Hwy 5, 18 Jun 1983, S. Harris, 1 ♂. Shoal Creek x Co. Rd. 8, 18 Jun 1983, S. Harris, 2 ♂; Little Cypress Creek x Co. Rd. 8, 18 Jun 1983, S. Harris, 1 ♂. *Marion Co.,* Buttahachee River, 9 mi. E. Hamilton off Hwy 278, 28 Jun 1983, S. Harris, 3 ♂; same locality, 29 May 1983, S. Harris, 1 ♂. *Mobile Co.,* Cedar Creek, 6 mi. E. Citronelle, 24 Jun 1982, Harris and O'Neil, 4 ♂; same locality, 4 Aug 1982, S. Harris, 1 ♂; Little Creek, 3 mi. E. Citronelle, 4 Aug 1982, S. Harris, 1 ♂; Escatawpa River, 7 mi. W. Citronelle, 25 Jun 1982, Harris and O'Neil, 1 ♂; same locality, 13 May 1982, S. Harris, 4 ♂; Indian Grave Creek at junction Cedar Creek, 6 mi. E. Citronelle, 24 Jun 1982, Harris and O'Neil, 1 ♂. *Monroe Co.,* Brushy Creek at Peterman, 15 May 1982, S. Harris, 1 ♂; Beaver Creek x Hwy 41, 15 May 1982, S. Harris, 2 ♂. *Sumter Co.,* Jones Creek x Hwy 39, 6 Jun 1983, Harris and O'Neil, 1 ♂. *Washington Co.,* Pond Creek x Co. Rd. 9, 13 May 1982, S. Harris, 5 ♂. MISSISSIPPI, *Neshoba Co.,* 4 mi. N. Dixon, 9 May 1979, P.K. Lago, 2 ♂.

The holotype and three paratypes are deposited in the United States National Museum of Natural History. The remaining paratypes are deposited at Clemson University, the Illinois Natural History Survey, The Royal Ontario Museum, and in the collections of the authors.

Etymology. Latin adjective, *serratus,* meaning "provided with a saw," referring to the serrate apices of the lobes of tergum S.

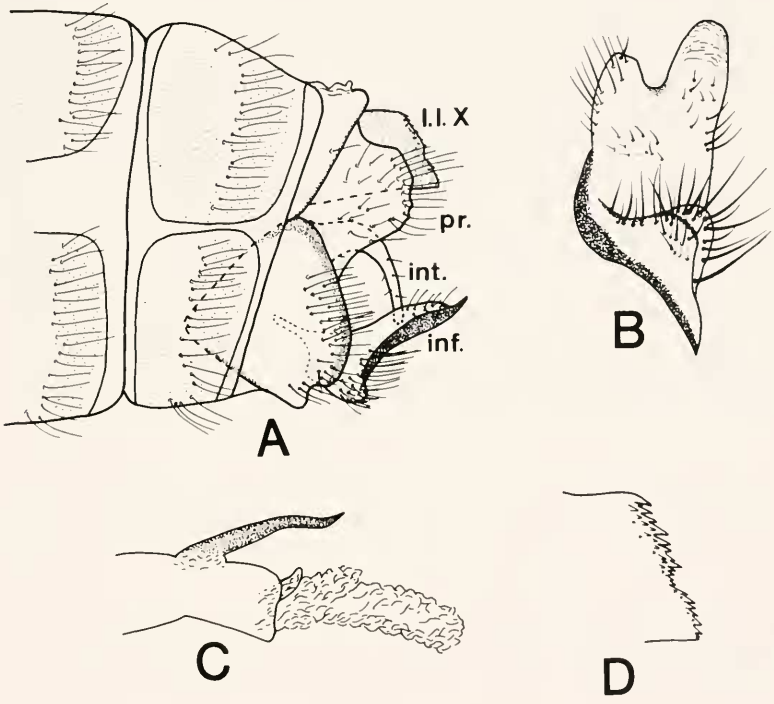

Fig. 1. *Nyctiophylax serratus* n. sp., male genitalia. (A) Lateral view: (B) left inferior appendage, caudal aspect; (C) aedeagus, lateral view; (D) apex of lateral lobe of tergum X, lateral view (250x).

Nyctiophylax serratus does not closely resemble any described species. The serrated apex of the lateral lobes of tergum X is unique among North American species; however, the serrations are not large and are easily overlooked when observed under a dissecting microscope. They are best seen under compound microscope (at least 100x). The lateral lobes are conspicuously sclerotized throughout but the apex is not nearly as acute as it is in *banksi* or *denningi,* so it is difficult to proceed past couplet 2 in the key presented by Morse (1972). Choosing the first option, specimens will key to *banksi.* These species share the straight mesal margin of the inferior appendages, but are easily separable on the basis of the general shape of the lateral lobes of tergum X (trapezoidal and serrate in *serratus,* acute in *banksi*) and the relative shape of the mesal lobe of the inferior appendages (as broad as lateral lobe in *serratus,* narrow and finger-like in *banksi*). The shape of the lateral lobes of tergum X is actually most similar to that of *N. uncus* Ross; however, the long curved median lobe of the inferior appendages in *uncus* (see Ross, 1944, Fig. 263 B) is sufficient to separate the two species.

Disregarding the sclerotization of the lobes of tergum X, and choosing the second option in couplet 2 (Morse, 1972), specimens will key to *affinis* (which was our initial determination). The two species differ as follows: in *serratus* the lateral lobes of tergum X are elongate and blade-like, conspicuously sclerotized (appearing uniformly yellow) and serrate, *affinis* lacks blade-like lateral lobes, tergum X appearing membranous, entire and shorter than the preanal appendages; the inferior appendages in *serratus* are not shouldered mesally as they usually are in *affinis;* and the intermediate appendages in *serratus* are evenly decurved (as in *banksi*) instead of being hooked apically as in *affinis.* We have examined series of both *affinis* and *serratus* from various localities in our study area and have not seen specimens that could be considered intermediate.

ACKNOWLEDGMENTS

We wish to thank P.E. O'Neil for his assistance in obtaining the specimens used during this study. B.P. Stark and J.C. Morse provided valuable comments concerning the preparation of this manuscript.

LITERATURE CITED

Lago, P.K., and S.C. Harris. 1983. New Species of Trichoptera from Florida and Alabama. Ann. Entomol. Soc. Amer. 76: 664-667.

Morse, J.D. The genus *Nyctiophylax* in North America. J. Kansas Entomol. Soc. 45: 172-181.

Ross, H.H. 1944. The caddisflies, or Trichoptera, of Illinois. Bull. Illinois Natur. Hist. Surv. 23: 1-326.

Schmid, F. 1980. Les Insects at Arachnides du Canada, Partie 7. Genera des Trichopteres du Canada et des Etats adjacents. Agriculture Canada, Ottawa. 296 pp.